

IN THE CLAIMS

Please cancel non-elected claims 8-17 without prejudice.

Please amend the following claims and add new claims.

1. (Amended) A method for forming hardened interconnects comprising:
depositing a metal layer over a semiconductor wafer surface;
introducing additional metal species into said metal layer; and
performing chemical-mechanical polishing of said deposited metal layer wherein said additional metal species hardens said deposited metal layer to reduce the rate of said polishing.

2. The method of claim 1, wherein said deposited metal layer is copper.

3. The method of claim 2, wherein said additional metal species is beryllium.

4. The method of claim 3, wherein the beryllium forms a solid solution in said deposited copper layer.

5. (Amended) A method for forming hardened interconnects comprising:
depositing metal layers over a semiconductor wafer surface;
introducing additional metal species;
heating the deposited metal film with the introduced metal species;

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allowing the heated metal film to cool, so as to form precipitates of said introduced metal species; and

performing chemical-mechanical polishing wherein said additional metal precipitate hardens said deposited metal layer to reduce the rate of said polishing.

6. The method of claim 5, wherein the deposited metal layer is copper.

7. The method of claim 5, wherein the additional metal species is beryllium.

Please add new claims 18-21:

18. (New) A method of forming interconnects of an integrated circuit comprising:

forming an opening in an insulating film formed over a substrate;

depositing a metal film over said insulating layer and in said opening and filling said opening with said metal film;

introducing an additional metal species into said metal film in said opening and into said metal film over said insulating layer; and

after introducing said additional metal species, chemical mechanical polishing said deposited metal film with said additional metal species to remove said metal film from over said insulating layer.

19. (New) The method of claim 18 wherein said metal film comprises copper.

20. (New) The method of claim 19 wherein said additional metal species is beryllium.

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21. (New) The method of claim 18 further comprising heating said deposited metal film with said introduced metal species prior to performing said chemical mechanical polishing.
